

**Appln No. 10/075,473**  
**Amdt date September 3, 2004**  
**Reply to Office action of June 3, 2004**

### **REMARKS/ARGUMENTS**

In the Office action dated June 3, 2004, the examiner rejected claims 7-9, 14-16 and 21-23 under 35 U.S.C. § 112 as allegedly indefinite. The examiner takes the position that the "heat-treating step" limitations in those claims lack proper antecedent basis. However, applicants have amended independent claims 1, 10 and 17 to recite a heat-treating step comprising first and second heat treatments. Applicants have also amended dependent claims 8, 15 and 22 to recite further limitations of the first and second heat treatments and to correct the dependencies in those claims, and have canceled claims 7, 9, 14, 16, 21 and 23, as the limitations of those claims have been added to independent claims 1, 10 and 17. Accordingly, applicants request withdrawal of the examiner's indefiniteness rejection.

The examiner also rejected claims 1-26 under 35 U.S.C. § 103(a) as allegedly unpatentable over Kweon, et al. (U.S. Patent No. 6,210,834), which the examiner points out is the English equivalent of Japan 2000058059. However, applicants have amended independent claims 1, 10 and 17 to recite a heat-treating step comprising a first heat treatment at a temperature ranging from about 400°C to about 500°C, and a second heat treatment at a temperature ranging from about 700°C to about 900°C. Kweon neither teaches nor suggests such a combination of heat-treating steps. Rather, Kweon discloses a first heat-treating process at a temperature between 700°C and 900°C, and a second heat-treating process at a temperature between 400°C and 600°C. (Column 4, lines 31-44). Therefore, not only does Kweon teach a different combination of steps, Kweon teaches away from the claimed invention by teaching the opposite heat-treating steps of amended independent claims 1, 10 and 17.

Moreover, independent claims 1, 10 and 17 recite a liquid doping source. Kweon fails to teach or suggest such a liquid doping source. Instead, Kweon appears to disclose a doping source added to the metal mixture in solid form, along with a chelating agent. (Column 3, lines 61-64). The liquid doping source disclosed in the present application enables uniform distribution of the doping element, a result which is difficult to achieve using a solid doping source such as that apparently disclosed in Kweon. In addition, the use of a liquid doping source

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significantly improves the high-rate charge and discharge capability, cycle life and specific discharge capacity of the positive active material. Accordingly, applicants submit that claims 1, 10 and 17, as amended, and all claims dependent therefrom, including claims 2-6, 8, 11-13, 15, 18-20, 22, 24 and 25, are allowable over Kweon.

In addition, the examiner rejected claims 1-3 and 5-26 under 35 U.S.C. § 103(a) as allegedly unpatentable over Doddapeni (U.S. Patent No. 5,567,401). However, like Kweon discussed above, Doddapeni fails to teach or suggest the specific heat-treating steps recited in amended independent claims 1, 10 and 17. In addition, Doddapeni fails to teach or suggest the use of a liquid doping source. Accordingly, applicants submit that independent claims 1, 10, and 17, as amended, and all claims dependent therefrom, including claims 2-6, 8, 11-13, 15, 18-20, 22, 24 and 25, are allowable over Doddapeni.

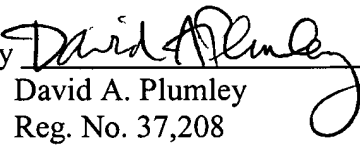
The examiner also rejected claim 4 under 35 U.S.C. § 103(a) as allegedly unpatentable over Doddapeni in view of Kweon. However, claim 4 is dependent from amended independent claim 1, which is allowable over Doddapeni and Kweon as discussed above. Therefore, claim 4 is also allowable over Kweon and Doddapeni.

Finally, the examiner rejected claims 1, 2, 5-7, 9, 10, 13, 14, 16, 17, 20, 21, 23-25 under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over claims 1-5 of Kweon. However, as discussed above Kweon discloses a completely different heat treating process than that claimed in amended independent claims 1, 10 and 17. Accordingly, applicant submits that independent claims 1, 10 and 17, and all claims dependent therefrom, including claims 2-6, 8, 11-13, 15, 18-20, 22, 24 and 25, are allowable over Kweon.

Claims 1-6, 8, 10-13, 15, 17-20, 22, 24 and 25 remain pending in this application. Applicants have amended claims 1, 8, 10, 15, 17 and 22, and have canceled claims 7, 9, 14, 16, 21 and 23. Applicants submit that all of pending claims 1-6, 8, 10-13, 15, 17-20, 22, 24 and 25, as amended are in condition for allowance. Applicants therefore request a timely indication of allowance. However, if there are any remaining issues, the examiner is asked to contact applicants' counsel at the number below.

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